



DEPARTMENT OF THE NAVY  
COMMANDER NAVY REGION SOUTHWEST  
937 NO. HARBOR DR.  
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:  
5090  
Ser N40.cs/0006  
March 19, 2009

Bonnie Soriano  
Air Resources Board (ARB)  
1001 "I" Street, 23rd Floor  
Sacramento, California 95814

Dear Ms. Soriano:

SUBJ: 15 DAY REVIEW OF PUBLIC HEARING TO CONSIDER THE ADOPTION  
OF REGULATIONS ON FUEL SULFUR AND OTHER OPERATIONAL  
REQUIREMENTS FOR OCEAN-GOING VESSELS(OGV) WITHIN  
CALIFORNIA WATERS AND 24 NAUTICAL MILES OF THE  
CALIFORNIA BASELINE

Thank you for the opportunity to comment on your supplemental analysis in response to the issues we identified. Let me start by stating again that the US Navy fully supports ARB's goals to achieve emission reductions from the commercial shipping industry. In fact the military was an innovator in many areas where ARB now has final regulation, for example, cold ironing and clean fuels.

Our overall concern has, and continues to be, the impacts of commercial shipping moving out of the Santa Barbara Channel into the Point Mugu Sea Range (Sea Range) as a method of avoiding the proposed rule. We are appreciative of ARB's commitment to supplement the environmental impact analysis, per our request. However, after reviewing this analysis, we continue to have a basic concern that the analysis understates the impacts to air quality and public health from a scenario where commercial shipping traffic moves into the Sea Range thereby avoiding the mandates in this rule.

In summary, we believe that this concern can be easily alleviated by adding one more scenario to the existing 3 scenarios in Table 1 from Attachment 4. That fourth scenario is required to enable the Board to compare 50% avoidance and 100% avoidance scenarios with **actual compliance** with the clean fuels regulation. We believe the column would read 0% avoidance in the nomenclature laid out in the supplemental environmental analysis. The rationale behind this request is

that the supplemental environmental analysis is incomplete without an understanding of the environmental and human health benefit from full compliance with the regulation. These numbers would then be easily compared to certain percentage Ocean Going Vessels (OGV) avoiding the regulation by transiting the Sea Range. As the information is currently presented, the decision maker is misled into thinking the avoidance is less significant, because the decision maker is not presented with emission reductions from full compliance. Therefore the decision maker cannot make an informed decision whether or not there is a significant adverse impact from OGV moving into the Sea Range and avoiding the regulation, because the decision maker isn't presented with the emission reductions from the regulation. This is more fully discussed below.

**TRUE EMISSIONS IMPACTS HAVE BEEN UNDERSTATED:** Consider Table 1 from Attachment 4:

**Table 1. Estimated OGV Statewide Emissions (tons/day) for Three Scenarios (2005 inventory, 100 nm SIP zone)**

Pollutant	Baseline Scenario	OGV Fuel Rule with 50% Avoidance	Difference* (50% Avoid vs. Baseline)	% Change* (50% Avoid vs. Baseline)	OGV Fuel Rule with 100% Avoidance	Difference* (100% Avoid vs. Baseline)	% Change* (100% Avoid vs. Baseline)
SOx	147	62	-85	-58%	78	-69	-47%
PM <sub>2.5</sub>	19	10	-9	-47%	12	-7	-36%
NOx	212	216	4	2%	230	17	8%
HC	7.4	7.8	0.4	5%	8.2	0.8	11%
CO <sub>2</sub>	9168	9332	164	2%	9834	665	7%

\*Positive value indicates an increase in emissions (disbenefit) relative to the baseline. Negative values represent a decrease in emissions (benefit) relative to the baseline.

The description of the Baseline Scenario is stated as:

For the Baseline Scenario, emissions were estimated for 2005 using existing vessel traffic patterns and fuel usage. This scenario corresponds with the CEQA baseline of existing conditions.

As we understand it, the baseline does not take into account any emission reductions from the OGV regulation (fuel or speed reduction) within the 24NM zone including the Santa Barbara Channel. From this table and description we make the following key observation: an alternative scenario showing 0% avoidance was not studied. Stated differently, an alternative showing full compliance the OGV fuel regulation is not included. We conclude this omission understates the true impact of moving the shipping channel as currently all

scenarios are being compared against a unregulated OGV fleet inventory.

PM2.5 is our first example. If you go to the original ISOR for the rule, the 2014 emissions for the unregulated inventory are 19 tons per day. The PM2.5 emissions after the regulation, per the ISOR which assumes 0% avoidance, is around 4 tons per day, a reduction of 15 tpd.

Please consider the following: a policy maker reading Attachment 4 would see that 100% avoidance still results in a 7 tpd reduction of PM 2.5. A reasonable conclusion is avoidance is acceptable. A very different answer emerges if this reader were to actually compare the "cost" of this avoidance to the results of the rule with 0% avoidance, or full compliance with the proposed regulation. In this instance, the "cost" of 100% avoidance is an increase in PM2.5 emissions of 8 tpd. With 50% avoidance there is a PM2.5 increase of 6 tpd. The Navy believes this actual increase over a 0% avoidance, or full compliance alternative represents the public policy question that must be modeled, including modeling for cancer and health risks. Unless ARB is willing to proceed with a no action alternative, which the analysis rejects, the true public policy comparison must be 0% avoidance versus the two avoidance alternatives.

We could not find a similar number for NOx to adjust the baseline. We did find, however, that the ISOR states in 2020 there will be a 15 tpd NOx reduction from the rule. Therefore, if you adjust the baseline from Table 1 above for this, the 0% avoidance, or full compliance alternative might be 197 tpd. Repeating the analysis above, the true impact of 100% avoidance is a NOx increase of 33 tpd, not 17. A 50% avoidance alternative has a true NOx impact of 19 tpd, not 4.

In sum, we do not believe that this analysis provides the basis for an apples-to-apples comparison. We believe that the structure of this analysis tends to hide the true impacts of increased use of our Sea Range through avoidance of the ARB proposed regulation.

The situation for Table 4 relating to vessel speed reduction (VSR) is similar.

**Table 4. Estimated OGV Statewide Emissions (tons/day) Comparing Impacts Due To Cumulative Impacts Of 10 Knot Vessel Speed Limit In The Santa Barbara Channel Combined With Avoidance**

SOx	147	62	-58%	78	-47%
PM <sub>2.5</sub>	19	10	-47%	12	-36%
NOx	212	211	-1%	229	8%
HC	7.4	7.6	3%	8.2	11%
CO <sub>2</sub>	9168	9130	-0.4%	9829	7%

\*Positive value indicates an increase in emissions (disbenefit) relative to the baseline. Negative values represent a decrease in emissions (benefit) relative to the baseline.

It appears that the NOx increase from 100% avoidance is only 17 tons. Four of the five ports where VSR is being considered, however, are in south Coast and they account for an overwhelming majority of ship traffic. The baseline scenario removes all these reductions from the analysis. The increases showing up are the extra distance from the 100% avoidance.

Slide 24 from ARB's VSR public presentation shows a NOx reduction from the 40NM VSR of 33 tpd. Based on this reduction, a 0% avoidance scenario NOx level should be reduced to at least 179 tpd. Therefore, a 100% avoidance alternative has, we argue, an actual NOx increase of 50 tpd, not 17. We believe that this analysis must consider the impacts, including subsequent health impacts, from a 0% avoidance alternative to make these analysis apples-to-apples.

**SOUTH COAST IMPACTS:** The modeling analysis performed for the south coast also suffers from the flaw described above. All comparisons of the use of the sea range through the 50% and 100% avoidance scenario are compared to the baseline with no controls on shipping in the Santa Barbara Channel. We believe that if you modeled a full compliance scenario with emissions reduced through clean fuel and VSR, versus the avoidance alternatives with bunker fuel and no VSR you would have a significantly different result. Until such analysis is done we would reserve judgment on the results of these models and believe that any decision rendered on the potential impacts of the proposed action has not been adequately studied.

**GREENHOUSE GAS IMPACTS:** California and ARB in particular, has been a world leader in the effort to reduce greenhouse gas emissions (GHG.) Looking at Table 1 above, it appears that the

100% avoidance has but a mild impact on GHG emissions: a 661 tpd increase in CO2 emissions or 241,265 tons per year or 218,875 metric tons CO2. This equate to 0.2 million metric tons CO2 equivalent (MMTCO<sub>2</sub>E).

As discussed above, this is measured against a baseline scenario where there are no controls in place. Therefore, the GHG reductions from VSR are not included. To correct this, we go to slide 28 from the VSR public presentation. This slide presents 2020 GHG emission reductions of 2,260 tpd based on a 12 knot VSR. We contend that the 0% avoidance scenario or full compliance with VSR regulations, for GHG analysis is not 9,168 tpd, but 6,908 tpd. Of course, a 10 knot VSR would be expected to reduce this even further. Notwithstanding this, the true GHG impact from the 100% avoidance or full compliance alternative is 2,921 tpd or 1,066,165 tons per year. This equates to 0.97 MMTCO<sub>2</sub>E. For comparison, the AB 32 Scoping Plan's 2020 reductions from several adopted policies are as follows:

Industrial Measures (for sources covered under cap-and-trade program)	1.1MMTCO <sub>2</sub> E
High Speed Rail	1.0MMTCO <sub>2</sub> E
Recycling and Waste (landfill methane capture)	1.0MMTCO <sub>2</sub> E
State Government Operations	1-2MMTCO <sub>2</sub> E
Methane Capture at Large Dairies	1.0MMTCO <sub>2</sub> E
Medium/Heavy Duty Vehicles	1.4MMTCO <sub>2</sub> E

This puts into perspective the significance of a 0.97 MMTCO<sub>2</sub>E increase. We question ARB's dismissal of this increase based upon other criteria pollutant reductions in light of the above discussion. The 0% avoidance, or full compliance scenario is the appropriate standard for comparison and we believe the 0.97 MMTCO<sub>2</sub>E cannot be dismissed as the analysis does.

**SOCIOECONOMIC IMPACTS:** While the document speaks to the importance of the Point Mugu Sea Range and its extensive use, the analysis does not consider or state the potential national security impacts if avoidance results in continual cancelling to tests and exercises. A 2006 Economic Impact Study about Naval Base Ventura County, presented by the Workforce Investment Board of Ventura County, reported NBVC as the largest employer in the county, with over 19,000 personnel (military and civilian) working for, or stationed on the base in all categories, and contributing directly or indirectly to another 8,200 jobs throughout the county. NBVC contributes

significantly to the economic health of the area, with an economic impact exceeding \$1.2 billion in 2006.

According to a statement by Bill Buratto, Ventura County Economic Development Association President and Chief Executive Officer, "NBVC is the fifth-largest base in the country. The work in electronic warfare, naval weapons systems and testing and evaluation of a host of technologies have added immeasurably to our national defense. The employees and military personnel have enhanced our quality of life through their volunteerism and involvement in our community."

Point Mugu is one of two bases comprising Naval Base Ventura County. The above referenced study did not segregate Point Mugu. Even assuming Point Mugu was only one-third of the total; this represents an economic figure of over 6,000 personnel and \$400 million per year. We are not suggesting Point Mugu would close if the Sea Range were lost. If the 17,000 yearly operations in the Sea Range were not available, however, it is a fair question to ask how much of the civilian and contractor support for these high tech operations would be necessary. We certainly believe this should be a consideration in this analysis.

In this light, there is a statement in the report that needs to be changed. At the bottom of page 11 and top of page 12, the report says, "The U.S. Navy argues that an increase in traffic in the Point Mugu Sea Range would potentially interrupt naval exercises, even if vessels abide by posted advisories. Ship traffic in the Point Mugu Sea Range could result in a temporary halt in exercises, and in the worst case, would create an accident risk that could potentially close the Point Mugu Sea Range." Under no circumstances would we proceed with a test if there were non-participating vessels in the hazard pattern - period. The real impact is that tests would be interrupted, delayed or cancelled. This reinforces the need for consideration of these socioeconomic impacts.

**CONSIDERATION OF AVOIDANCE:** The supplemental analysis is based on a premise that OGV will not seek to avoid this clean fuels regulation by transiting the Sea Range.

ARB staff believes that there are a number of issues that will impede the wide scale use of an avoidance route by the shippers instead of continuing to use the established Santa Barbara Channel route.

While we are hopeful that ARB staff is proved correct, the Navy is pursuing this analysis due to the fact that we have been contacted on numerous occasions to do just what ARB is saying will not happen, OGV transiting the Sea Range to avoid regulation. Public policy makers, the Board in particular were persuaded at the hearing on this measure and directed this supplemental review. We owe it to the Board to present them with all the relevant analysis necessary for them to make an informed decision. The analysis as it stands does not accomplish this goal. While the question of fuels is one of costs, the question for VSR is one of time. A 10 knot speed limit through the Santa Barbara Channel which can be avoided if the Sea Range route is used presents a much more fundamentally different choice to a ship's operator. The fact that the Sea Range transit also allows for burning cheaper fuel is additive. Therefore, we do not agree that the supplemental analysis can dismiss the cumulative impact considerations as are done throughout the document.

**CONCLUSION:** Once again, the Navy is not in any manner opposed to regulation of commercial shipping. We are opposed, however, to any regulation that may influence the shipping community to avoid long established shipping routes. We do not believe this supplemental analysis to be adequate.

We believe that ARB must in light of our comments consider an alternative to its OGV regulatory program that ensures that shipping activity will remain within these long established shipping lanes. We believe that combinations of regulation and incentives must be considered in close cooperation with all parties. For example, a regulatory scheme whereby requirements imposed on the ships calling on south coast ports could be substantially reduced if that ship used clean fuels in the Santa Barbara Channel at a reduced speed. With today's tracking technology such an arrangement is enforceable and quantifiable meeting Clean Air Act requirements.

Such an outcome will protect vital national security interests, socioeconomic concerns, and most importantly be more protective of public health. In this light, we urge ARB to continue to work with the Ocean Protection Council on overall strategies to accomplish these goals.

My point of contact for this matter is Randal Friedman at 619 572-5037.

Sincerely,

A handwritten signature in black ink, appearing to read "C.L. Stathos". The signature is fluid and cursive, with a large loop at the end.

C.L. Stathos  
By Direction

Copy to:

Drew Bohan, California Ocean Protection Council  
T.L. Garrett, Pacific Merchant Shipping Association  
Tim Carmichael, Clean Air Coalition